**Reference**


**P7 NEURONAL DYSFUNCTION IN ASTHMA; INSIGHTS FROM THE STUDY OF THE COUGH REFL**

**Method**

A capsaicin inhalational challenge (doubling doses 0.49 to 1000[micro]M) was performed. Four inhalations 30 seconds apart were performed at each concentration and the total coughs evoked at each dose were recorded and verified using a cough monitor. The highest total number of evoked coughs (E_max) as an end point better discriminates between health and disease and correlates strongly with subjective cough measures.2

**Objective**

To assess the differences in the maximum cough responses evoked by capsaicin (E_max) between asthmatics and healthy volunteers.

**Results**

Forty-nine asthmatics were compared with 47 healthy volunteers. There was a significant difference in the E_max between asthmatics and healthy volunteers (mean coughs 20.5 (SD±10.1) and healthy volunteers 13.1 (±7.2) (p < 0.001). See Figure 1.

**Conclusion**

Using this novel full dose response methodology, this data suggests that even during stability, asthmatics have an exaggerated cough response to capsaicin. This suggests that subgroups of asthmatics have neuronal dysfunction which can be identified by this capsaicin challenge.

**References**


**P8 OBJECTIVE COUGH FREQUENCY MONITORING IN BRONCHIECTASIS**

**Introduction and objectives**

Cough is a major symptom in bronchiectasis. Cough monitors are emerging as an important tool that assess cough objectively. The aim of this cross-sectional study was to assess cough frequency in non-cystic fibrosis bronchiectasis, investigate its association with patient-reported symptoms and health-related quality of life (HRQOL), and investigate potential factors of cough frequency variability.

**Methods**

Patients with non-cystic fibrosis bronchiectasis were recruited from 2 outpatient bronchiectasis clinics. All patients underwent 24-hour ambulatory cough monitoring with the Leicester Cough Monitor, and reported sleeping time in a diary. The patients also completed the Leicester Cough Questionnaire (HRQOL), and visual analogue score (VAS) for sputum and cough severity. Sputum bacteria colonisation status was assessed, and defined as at least 2 positive cultures, minimum 3 months apart and within one year.

**Results**

Forty-nine patients were recruited; median (IQR) age 65 (52–70) years, 64% female. The aetiology of bronchiectasis were: idiopathic (45%), post infective (29%) and other (25%). The prevalence of sputum colonisation were: pseudomonas aeruginosa

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**Abstract P7 Figure 1**

Comparison of capsaicin evoked coughs between asthmatics and healthy volunteers

**Abstract P8 Figure 1**

Cough frequency in patients with non-cystic fibrosis bronchiectasis. Data presented as median (IQR)
Cough is prevalent in higher proportion of the Effect of Naltrexone, an Opioid Receptor Antagonist, on Capsaicin Evoked Cough, in Healthy Male Subjects

Introduction Chronic cough is a troublesome condition that reduces patient quality of life. Recent evidence suggests that healthy females cough more than healthy males but the mechanism underlying this is unclear. We hypothesise that opiate-sensitive inhibitory control mechanisms determine capsaicin-evoked cough responses in healthy subjects.

Aim To show that in healthy males the number of capsaicin-evoked coughs is increased following administration of naltrexone, an opiate receptor antagonist, compared with placebo.

Method 15 male subjects (median age 30 yrs (21–59)) were recruited in to a randomised double blind cross-over trial of single doses of naltrexone vs. placebo given 1 week apart. A capsaicin inhalational challenge (doubling doses 0.48 to 125[μ]M) was performed 60 min after ingestion of naltrexone/placebo using a dosimeter. Four inhalations 30 seconds apart were performed at each concentration and the total coughs evoked at each dose were recorded and verified using a cough monitor. Regression analysis was performed to assess the efficacy of therapy.

Results There was a tendency for subjects to cough more when treated with naltrexone vs. placebo given 1 week apart. A capsaicin inhalational challenge (doubling doses 0.48 to 125[μ]M) was performed 60 min after ingestion of naltrexone/placebo using a dosimeter. Four inhalations 30 seconds apart were performed at each concentration and the total coughs evoked at each dose were recorded and verified using a cough monitor. Regression analysis was performed to assess the efficacy of therapy.

Discussion Interestingly both NSIP and IPF cohort reported cough; however, proportionally NSIP patients have less cough (14/51, 27.4%) compared with IPF (37/261, 14%).

Conclusions Cough occurs in a huge majority of patients with both IPF and NSIP. Cough appears to be a greater problem in older patients.

REFERENCES
2 Key AL et al. Objective cough frequency in Idiopathic Pulmonary Fibrosis. Cough. 2010:6:4

P9 COUGH IS PREVALENT IN HIGHER PROPORTION OF OLDER PATIENTS WITH BOTH IDIOPATHIC PULMONARY FIBROSIS AND NON-SPECIFIC INTERSTITIAL LUNG DISEASE

Introduction Cough is a major symptom of Idiopathic Pulmonary fibrosis (IPF), a progressive, fatal lung disease with median survival of 3 years. The first study to suggest cough as an independent predictor of disease progression, reported it in 84% of the population. The only study to quantify cough in 19 IPF patients, reported strong correlation between objective cough counts and cough related quality of life. There is a lack of studies investigating the prevalence, pathogenesis or treatment of cough in bronchiectasis and evaluate the potential of cough frequency as an outcome measure for assessing the efficacy of therapy.